

**What Is Claimed Is:**

1           1. An apparatus for supporting one or more servers on a single  
2 semiconductor chip, comprising:  
3           a plurality of first-level translation lookaside buffers on the single  
4 semiconductor chip, wherein each first-level translation lookaside buffer is  
5 associated with a processor core of a plurality of processor cores on the single  
6 semiconductor chip; and  
7           a second-level translation lookaside buffer that is coupled to the plurality  
8 of first-level translation lookaside buffers;  
9           wherein an access to a page table entry in main memory by a processor  
10 core associated with a first-level translation lookaside buffer can be stored in the  
11 second-level translation lookaside buffer before being forwarded to the first-level  
12 translation buffer associated with the processor that requested the page table entry;  
13           whereby storing the page table entry in the second-level translation  
14 lookaside buffer eliminates a need to refer to main memory to access the same  
15 page table entry if another processor requests the same page table entry.